


1. SHISHKIN, A.G.
2. USSR (600)
4. Rotation of Crops
7. Introducing feed crop rotations on the Lenin Collective Farm. Korm.baza 3 no. 12, 1952

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified

SHISHKIN, A.G., nauchnyy sotrudnik.

Economic effectiveness of corn. Nauka i pered. op. v sel'khoz.  
no.9:39-40 S '56. (MLRA 9:10)  
(Corn (Maize))

FINKEL'MAN, S.: SHISHKIN, A. 

Use of grain drying and cleaning towers at grain procurement points  
in Saratov and Chelyabinsk Provinces. Muk.-elev. prom. 24 no.8:  
9-10 Ag '58. (MIRA 11:10)

1. Saratovskoye oblastnoye upravleniye khleboproduktov (for  
Finkel'man). 2. Nachal'nik sushil'no-ochistitel'noy bashni Nizhne-  
Uvel'skogo khlebopriyemnogo punkta Chelyabinskoy oblasti (for  
Shishkin).

(Grain-handling machinery)

both cases the tumors were found in old cows after they had  
been slaughtered.

Card : 1/1

SHISHKIN, A. I.

Grasses

Greater attention to annual rye grass, Korm. baza 2 No. 3, 1951

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified

ELSUKOV, M. P., SHISHKIN, A. I.

Grasses

Annual rye grass, its role in farm economy and scientific agriculture. Korm. baza 3 no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

SHISKHIN, A. I.

"Agrobiological Characteristics and Agrotechnical Problems of Annual Rye Grass." Cand Agr Sci, All-Union Sci Res Inst of Fodder, Moscow, 1953. (RZhBiol, No 2, Sep 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

1. SHISHKIN, A. I.
2. USSR (600)
4. Rye Grass
7. Annual rye grass. Sel. i sem. 20, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

SHISHKIN, A.I., kandidat sel'skokhozyaystvennykh nauk.

Mixed crops. Nauka i pered. op. v sel'khoz. 6 no.11:40-43 N '56.  
(MLRA 10:1)

(Corn (Maize)) (Forage plants)



TINKER, I.S.; MIRONOV, N.I.; SHISHKIN, A.K.

"Prevention of plague" by V.N.Fedorov, I.I.Rogozin, B.K.Feniuk.  
Reviewed by I.S.Finker, N.I.Mironov, A.K.Shishkin. Zhur.mikrobiol.  
epid. i immun. 25 no.4:155-157 Ap '57. (MIRA 10:10)  
(PLAGUE--PREVENTION)  
(FEDOROV, V.N.) (ROGOZIN, I.I.) (FENIUK, B.K.)

SHISHKIN, A.K.

The Rostov-on-Don Plague Research Institute of the Ministry of Public  
Health of the U.S.S.R. Zhur.mikrobiol.epid. i immun. 28 no.9:101-107  
S '57. (MIRA 10:12)

(PLAGUE,  
Rostov-on-Don Anti-Plague Institute (Rus))

MIRONOV, N.P.; TINKER, I.S.; SHISHKIN, A.K.; SHIRANOVICH, P.I.;  
VAL'KOV, B.G.; IVANOV, I.Kh.; KARPUZIDI, K.S.; KLIMCHENKO,  
I.Z.; SHIRYAYEV, D.T.

Contemporary status of the plague focus in the northwestern  
Caspian Sea region and problems in its further study. Sbor.  
nauch. rab. Elist. protivochum. sta. no. 1:19-29 '59.

(MIRA 13:10)

(CASPIAN SEA REGION—PLAGUE)

SHISHKIN, A.K.

Epizootic of plague in the territory of the Kalmyk Steppe. Sbor.  
nauch. rab. Elist. protivochum. sta. no. 1:31-42 '59.

(MIRA 13:10)

(KALMYK A.S.S.R.—PLAGUE)

MIRONOV, N.P.; SHISHKIN, A.K.

"Lectures on the epidemiology of plague" by IU.M. Ball'. Reviewed  
by N.P. Mironov, A.K. Shishkin. Zhur.mikrobiol.epid. i immun. 30  
no.7:137-139 J1 '59. (MIRA 12:11)  
(PLAGUE) (BALL, IU.M.)

SHISHKIN, A.K.

Elimination of natural foci in the northwestern Caspian regions.  
Zhur. mikrobiol. epid. i immun. 32 no.5:9-15 My '61.

(MIRA 14:6)

1. Iz Rostovskogo-na-Donu nauchno-issledovatel'skogo protivochumnogo  
instituta.

(CASPIAN SEA REGION--PLAGUE)

L 5050-66(A) EWT(1)/EWA(j)/EWA(b)-2 RO/JK

ACC NR: AP5022047

SOURCE CODE: UR/0286/65/000/014/0115/0116

AUTHORS: Shishkin, A. P.; Kudryavtsev, N. A.; Belozovskiy, A. B.; Oletina, R. I.;  
Butyrina, G. A.

ORG: none

TITLE: A filtering lifesaver. Class 61, No. 173126 [announced by the Branch of the Organization of the State Committee on Chemistry, SSSR (Filial predpriyatiya Gosudarstvennogo komiteta po khimii SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 115-116

TOPIC TAGS: life support equipment, air conditioning system, respirator

ABSTRACT: This Author Certificate presents a filtering lifesaver containing a mouthpiece (mask), a corrugated hose, and a breathing box (see Fig. 1). To increase its protective ability and to simplify its construction, the lifesaver is provided with two perforated containers for sorbents such as hepcalite and a desiccant. These containers are hermetically sealed in the breathing box in such a way that the air to be inhaled passes through each container.

Card 1/2

UDC: 614.894

0.901 04.97

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549610002-3"

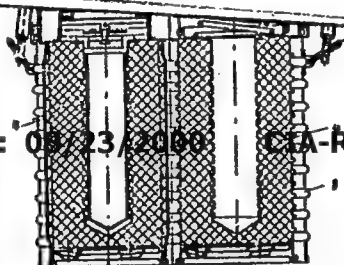


Fig. 1. 1- breathing box; 2- corrugated hose; 3- mouthpiece;  
4- perforated containers

Orig. art. has: 1 figure.

SUB CODE: LS SUBM DATE: 18Jan64/ ORIG REF: 000 / OTH REF: 000

Card 2/2

AID P - 1324

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 6/19

Authors : Direktor, B. Ya., Luneyev, V. V. and Shishkin, A. S.,  
Engineers

Title : Results obtained in the operation of a high pressure  
continuously operating coil boiler unit with liquid  
slag removal

Periodical : Teploenergetika, 2, 26-31, F 1955

Abstract : Outlined are results of work in operation and testing of  
a unit consisting of a continuously operating high pressure  
coil boiler with liquid slag removal of the 67-1-SP-  
230/100 type built by the Bureau for Construction of  
Continuously Operating Coil Boilers of the Podol'skiy  
Machine-Building Works im. Ordzhonikidze. This boiler is  
heated with pulverized Donets coal. Diagrams, charts.

Institution : As mentioned above

Submitted : No date



KOSHELEV, I.I., kand.tekhn.nauk; SHISHKIN, A.S., inzh.

Device for controlling steam temperature by injecting feed  
water into superheaters of high- and superhigh-pressure  
boilers with natural circulation. Teploenergetika 7 no.2:  
59-60 F '60. (MIRA 13:5)

1. Moskovskoye otdeleniye Tsentral'nogo kotloturbinnogo instituta.  
(Boilers)

KILIGINA, M.L. (Kazan'); KRUPIN, V.I. (Kazan'); SHEL'NOVA, A.K. (Kazan');  
SHISHKIN, A.V. (Kazan'); KHALYMBADZHA, V.G. (Kazan')

Stratigraphy of coal deposits in Tatarstan and southern Udmurt  
A.S.S.R. Uch.zap.Kaz.un. 115 no.10:94-98 '55. (MLRA 10:5)  
(Tatar A.S.S.R.--Coal geology)  
(Udmurt A.S.S.R.--Coal geology)

3(0)

AUTHORS:

Bludorov, A. P., Tuzova, L. S.,  
Shishkin, A. V.

SOV/20-123-3-37/54

TITLE:

The Coal Content of Lower Carboniferous Coal in Northwestern  
Bashkiriya (Uglenosnost' nizhnego karbona severo-zapadnoy  
Bashkirii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 513-516  
(USSR)

ABSTRACT:

Although Lower Carboniferous coal-bearing strata were found in all oil drill holes, the petroleum technicians usually speak of them only as coaly shales. The Kazan' Branch of the AS USSR has been concerned with this problem for several years. Bituminous coal occurs in Bashkiriya in the Tournaisian and Visean Stages. The former contains a fauna and spore assemblage in terrigenous deposits which (the assemblage) is characteristic of the Tournaisian Stage. Its thickness is 65-160 m, and oil was discovered in porous limestones. The Visean is represented in all substages and horizons. L. S. Tuzova discovered a spore assemblage here which is characteristic of the Stalinogorskiy horizon. The age was determined by this spore assemblage since no fauna have been

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The Coal Content of Lower Carboniferous Coal in  
Northwestern Bashkiriya

SOV/20-123-3-37/54

found in this horizon. The thickness of the Visean Stage is 25-74 m. Coal is rare in the Tul'skiy horizon, and a characteristic fauna, as well as Tul'skiy complex spores, occur in limestones. The thickness of the Tul'skiy horizon is 30-60 m. No coal was found in the higher lying sediments of the Lower Carboniferous. The limestones here and in the Middle and Upper Carboniferous contain a characteristic marine fauna. The coal-bearing sediments lie in northwestern Bashkiriya between the Tatarskiy and Bashkirekiy arches. The coal seams are found at a depth of -1150 to -1250 m, and in the south at -1750 m and perhaps still deeper. The coal-bearing masses of the Stalinogorskiy horizon formed on a swampy plain near a shallow sea. Its sediments belong to the following facies: a. littoral, b. river bed, c. deltaic, d. lacustrine and e. swamp. Alluvial sediments of facies d. and e. are predominant, and no fauna were found. The structure of the coal-bearing mass shows several variations. Thus, several groups of sections can be recognized: 1. Thick, white quartz sandstone with cross-bedded strata, dark gray aleurolith and argillite. This mass is 50-74 m thick here, and the coal

Card 2/4

The Coal Content of Lower Carboniferous Coal in  
Northwestern Bashkiriya

SOV/20-123-3-37/54

seams are also very thick. It lies in depressions of the limestone foundation on erosion surfaces of various old rocks. 2. Dark gray sandstones; however, argillite sometimes predominates. Coal seams are of slight thickness or absent. The mass here lie on highs of the limestone foundation, possibly with slight erosion. The thickness is 25-50 m. In conclusion the coal seams and the types of coal are described. Table 1 presents the chemical analysis. The authors distinguish: 1. cannel coal, 2. semi-cannel coal, 3. semi-anthracite and 4. coaly shales. The coals of the region discussed here lie at great depths and have reached the stage of long-flame coal in their transformation. They belong mainly to the humus coals. S. N. Naumova gave valuable advice and references. There are 1 table and 3 Soviet references.

ASSOCIATION: Kazanskiy filial Akademii nauk SSSR (Kazan' Branch of the Academy of Sciences, USSR)

PRESENTED: June 30, 1958, by N. M. Strakhov, Academician  
Card 3/4

BLUDOROV, A.P.; TUZOVA, L.S.; SHISHKIN, A.V.; SHUBAKOV, G.N.

Lower Carboniferous coal resources of southern Udmurtia. Dokl. AN  
SSSR 136 no.5:1168-1171 F '61. (MIRA 14,5)

1. Geologicheskiy institut Kazanskogo filiala AN SSSR. Predstavleno  
akad. N.M. Strakhovym.  
(Udmurt A.S.S.R.—Coal geology)

SHISHKIN, A.V.

Lower Carboniferous stratigraphy and tectonics of the Melkess  
trough. Uch. zap. kaz. un. 121 no.2:95-144 '61. (MIRA 14:9)  
(Volga Valley--Geology)

MIROPOL'SKIY, L.M., glav. red.; SEYFUL-MULYUKOV, R.B., otv. red.;  
AVER'YANOV, V.I., red.; MIROPOL'SKAYA, G.L., red.;  
URAZAYEV, I.M., red.; SHISHKIN, A.V., red.; YUSUPOV, B.M.,  
red.; KALANTAROV, A.P., red. izd-va; POLENOVA, T.F., tekhn.  
red.

[Characteristics of the distribution of oil and gas fields  
in the Volga-Ural region] Zakonomernosti razmeshcheniia  
mestorozhdenii nefiti i gaza Volgo-Ural'skoi oblasti. Mo-  
skva, Izd-vo AN SSSR, 1963. 365 p. (MIRA 17:2)

1. Kazanskiy filial AN SSSR (for Aver'yanov, Miropol'skaya,  
Urazayev, Yusupov).



SHISHKIN, V. A.

SHISHKIN, V. A.: "Structural elements of the hemolymph of bees (*Apis mellifera* L.) and changes in them depending on the age and condition of the bees." Min Higher Education USSR. Kazan' State Veterinary Inst imeni N. E. Bauman. Kazan', 1956. (Dissertation for the Degree of Candidate in Biological Sciences)

Knizhnaya litopis', No 39, 1956, Moscow,

L 19563-65 EWT(1)/EWT(m)/EEC(b)-2/EED-2/T/EWP(t)/EWP(b) IJP(c)/SSD/SSD(c)/BSD/  
APWL/ASD(a)-5/AS(mp)-2/AFETR/ESD(dp)/ESD(gs)/ESD(t) JD 8/0048/64/028/008/1360/1366  
ACCESSION NR: AP4044654

AUTHOR: Spivak, G.V.; Shishkin, B.B.; Michurina, K.A.; Khabel', V. B

TITLE: On the quantitative investigation of efficient emitters in a wide temperature range by observation of contrast in the electron-optical image Report, 11th  
All-Union Conference on Cathode Electronics held in Kiev, 11-18 Nov 1963 III

SOURCE: AN SSSR. IZV. Seriya fizicheskaya, v.28, no.8, 1964, 1360-1366

TOPIC TAGS: emitter, electron emission, electron microscopy, electron optics, cathode 21  
14

ABSTRACT: The present work was a continuation of a series of studies by the authors of emitters and surface emission by means of various electron-optical techniques. The authors' earlier analysis of contrast formation in an electron-optical image of an emitter is generalized to the case of nonuniform efficient cathodes. The results provide the basis for interpretation of data on local emission, taking into account various factors. For the present study there was used an electronic circuit that made possible rapid measurement of local currents from a whole region of the emitter, rather than from a point. The formation of (phase) contrast under the influence

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L 19563-65

ACCESSION NR: AP4044654

2  
of different factors (microfields, patch fields, photoemission, secondary emission, etc.) is discussed and the pertinent formulas are adduced. A block diagram of the emission electron microscope used for the study is shown in the Figure (Enclosure). A number of photographs of emitter surfaces are reproduced in the text. By means of the developed oscillographic procedure it should be feasible to perform rapid analyses of various cathodes in different stages of preparation. "The authors are grateful to A.M. Rozenfel'd for assistance in rebuilding the emission microscope." Orig.art.has: 10 formulas and 5 figures.

ASSOCIATION: Fizicheskii fakultet Moskovskogo gosudarstvennogo universiteta (Physics Department, Moscow State University)

SUBMITTED: 00

ENCL: 01

SUB CODE: EC,EM

NR REF SOV: 012

OTHER: 001

L 3826-66 EWT(m)/ETC/EWG(m)/T DS  
ACCESSION NR: AP5017665

UR/0109/65/010/007/1295/1299  
621.385.735.01

39  
35  
B

AUTHOR: Shishkin, B. B.; Dubinina, Ye. M.; Michurina, K. A.

TITLE: Electron-optical investigation of oxide-coated cathodes

SOURCE: Radiotekhnika i elektronika, v. 10, no. 7, 1965, 1295-1299

TOPIC TAGS: oxide coated cathode

ABSTRACT: The results are described of an investigation of oxide-coated receiving-amplifier tubes by means of a  $10^{-6}$ -torr, 30-kv, 170x-enlargement electron emission microscope. Three groups of 10000-hr-in-service tubes were tested: (1) those with totally lost emission; (2) those whose emission current dropped by 30-50% after 5000 hrs; (3) those which withstood the life test. It was found that the cathodes have specific emission patterns with lighter stripes 5-25-micron wide and up to several-hundred-micron long. These stripes correspond to cracks or crazes on the cathode surface. The latter, as a rule,

Card 1/2

L 3826-66

ACCESSION NR: AP5017665

4  
arose at early tube-treatment stages (after exhaustion). The cracks emit as well as or better than the brightest spots on the cathode. Good integral emission is associated with either (a) a network of cracks on the cathode or (b) fine-emission structure crazes. The latter ensure a longer tube life. "In conclusion, the authors wish to thank workers of the Moscow Electric-Lamp Factory L. M.

Lipkovskiy and Yu. F. Zarutskiy for lending the tubes and for useful discussions."

Orig. art. has: 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University)

SUBMITTED: 20Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 007

OTHER: 008

Card 2/2

L 36344-66 EMT(m)/T/EMP(e)/EMP(t)/ETI IJP(c) AT/DS/JD/JG/WH  
ACC NR: ARG015789 (A,N) SOURCE CCDE: UR/0048/66/030/005/0873/0876

AUTHOR: Shishkin, B. D., Dubinina, Ye. M.; Michurina, K. A.

ORG: Physics Department, Moscow State University Dr. M.V. Lomonosov (Fizicheskii  
Inkul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Electron-optical investigation of oxide-coated cathodes. Part 2. Report,  
Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in  
Leningrad 22-26 October 1965

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 873-876 and  
inserts facing p. 873.

TOPIC TAGS: thermionic emission, electron tube cathode, alkaline earth oxide, electron  
emission microscope, EEM-75, electron emission microscope

ABSTRACT: The oxide-coated cathodes of 53 receiving pentodes that had been subjected  
to a 10 000 hour life test were examined with an EEM-75 electron emission microscope.  
The cathodes were exposed to the atmosphere during transfer to the microscope. In the  
microscope the cathodes were outgassed for 15-20 minutes at  $10^{-6}$  mm Hg and were activat-  
ed for 10 minutes at  $1200^{\circ}$  K. The cathodes fell into three groups. The cathodes of  
the first group had many emitting centers on their surfaces and practically no cracks.  
These cathodes performed well in the life test. The surfaces of the cathodes of the  
second group were covered with networks of wide (up to 30 microns) cracks which emitted  
well. These cathodes performed poorly in the life test. The cathodes of the third

Card 1/2

(A) 1 12136-60

ACC NR: AP6000317

SOURCE CODE: UR/0356/65/000/010/0033/0037

AUTHOR: Shishkin, B. (Candidate of technical science)

ORG: Tractor Research Institute (Nauchno-issledovatel'skiy traktorny institut)

TITLE: From the tractor builders to agriculture

SOURCE: Tekhnika v sel'skom khozyaystve, no. 10, 1965, 33-37

TOPIC TAGS: tractor, tracked vehicle, agricultural machinery, automotive industry

ABSTRACT: This article describes new types of tractors to be built during the 1966—1970 period. The tractors are divided into classes based on their pulling capacity. In the 0.6-ton class, it is planned to modernize the DT-20 wheel tractor by installing a 24-hp, 2-cylinder diesel motor in place of the 18-hp one-cylinder diesel; the tractor will then be designated T-25. In the 0.9-ton class, the design of the T-40 tractor will be improved and its motor power increased. Several modifications of this tractor will be made for clearing tall crops and for industrial purposes. In the 1.4-ton class, a modified MTZ-50 tractor will be the basic model for working with 4- and 6-row attachments. The 2-ton class will include 4 types of caterpillar tractors: a T-54V vineyard tractor and, built on the basis of this model, orchard, beet, and timber-hauling tractors. There will be two basic models of general-purpose tractors in the 3-ton class: a caterpillar DT-75 tractor the motor power of which will be increased to 80—90 hp (DT-90), and a 130-hp T-125 wheel tractor with a four-wheel drive. In the 4-ton class, the basic model

Card 1/2

UDC: 631.37:629.114.2

L 12138-66

ACC NR: AP6000317

is the new T-4 general-purpose agricultural caterpillar tractor with a 110-hp motor, which will be increased to 130 hp in 1968. A modified model for swamps will be built on the base of the T-4. The K-700 200-hp general-purpose 4-wheel drive tractor will be the basic model in the 5-ton class. The motor power will be increased to 300 hp in 1969. In the 6-ton class, the heaviest class of agricultural tractors, the T-100M tractor will be replaced by the modernized T-130 tractor having a motor power of 140 hp, which will be increased to 160 hp in 1969. It is planned to build a swamp model of this tractor. In the 10-ton class an industrial version of the general-purpose T-130 will be produced for excavating and hauling work. The basic model in the 15-ton class is the general-purpose T-140 caterpillar tractor which will be built in three modifications: a swamp tractor, a pipe-laying tractor, and an excavating-hauling tractor. The DET-250 300-hp tractor will be produced in the 25-ton class. The plants producing the various tractors are named.  
Orig. art. has: 5 figures.

SUB CODE: 02, 13 / SUBM DATE: none

HW

Card 2/2



BGATOV, V.I.; AKUL'SHINA, Ye.P.; BUDNIKOV, V.I.; GERASIMOV, Ye.K.;  
GUROVA, T.I.; KAZANSKIY, Yu.P.; KAZARINOV, V.P.;  
KONTOROVICH, A.E.; KCSOLOBOV, N.I.; LIZALEK, N.A.;  
MATUKHIN, R.G.; MATUKHINA, V.G.; PETRAKOV, V.U.; RODIN,  
R.S.; SAVITSKIY, V.Ye.; SHISHKIN, B.B.; GRIN, Ye.P.,  
tekh. red.

[Lithoformational analysis of sedimentary rocks] Litologo-  
formatsionnyi analiz osadochnykh tolshch. Pod red. V.I.  
Bgatova i V.P.Kazarinova). (MIRA 16:7)

1. Sibirskiy nauchno-issledovatel'skiy institutu geologii,  
geofiziki i mineral'nogo syr'ya.  
(Rocks, Sedimentary--Analysis)

L 36320-66 EWT(1)/EWT(m)/T/EWP(e)/EWP(t)/ETI IJP(c) AT/WH/JD/HW/JG  
 ACC NR: AP6015783 (A,N) SOURCE CODE: UR/0048/66/030/005/0870/0872  
 AUTHOR: Shishkin, B. B.; Makher Sherif 67  
 ORG: Physics Department, Moscow State University in. M.V. Lomonosov (Fizicheskay fakul'tet Moskovskogo gosudarstvennogo universiteta) B  
 TITLE: Do monolayer thermionic emitters<sup>21</sup> exist? /Report, Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in Leningrad 22-26 October 1965/  
 SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 870-872 and inserts facing page 872  
 TOPIC TAGS: thermionic emission, electron tube cathode, barium, nickel, alkaline earth oxide  
 ABSTRACT: The authors discuss experimental work of their own and others bearing on the validity of L.S. Nergaard's treatment of a dispenser cathode as a semiconductor. Previous investigations with an electron emission microscope of cathodes fabricated from powdered nickel and alkaline earth carbonates led to the conclusion that during activation the main processes take place on the surfaces of nickel grains. New investigations have been undertaken with nickel platelets imbedded in pressed barium-nickel cathodes to represent macroscopic nickel grains. Before the cathodes were activated the electron emission images of the platelets were dark. During activation the emitting regions  
 Card 1/2

L 36320-66

ACC NR: APG015788

2

invaded the platelets, owing, apparently, to migration of barium. The emission from the invaded portions of the platelets was uneven, there being dark regions within the emission zone. These could be either regions of low work function from which atomic barium was rapidly evaporating, or spaces between barium oxide crystallites. Carbon replicas of the platelet surfaces shadowed with platinum and examined with a UEMV-100 electron microscope revealed crystalline formations and groups of them, some of the individual crystallites of which were 1000 Å long. It is assumed that the observed crystallites were barium oxide crystals, although direct experimental confirmation is lacking. It is concluded that crystallites can be formed on metallic grains in barium-nickel cathodes. It is suggested that the results of this work may be of assistance in understanding the processes involved in the adsorption of different substances on hot surfaces, and that there must be some residual gas pressure below which the crystallites will not form, owing to lack of oxygen. Orig. art. has: 3 figures.

SUB CODE: 20/

SUEN DATE: 00/

ORIG REF: 005/

OTH REF: 001

Card *pf*

SHISHKIN, B. K.

RECEIVED

1964

BOTANY

1963

BORKHVARDT, V.S.; DROZDOVA, I.N.; ZAKHAREVICH, S.F.; KOZLOVSKAYA,  
N.V.; MARKOVSKAYA, L.A. [deceased]; MINYAYEV, N.A.;  
MURAV'YEVA, O.A.; SERGIYEVSKAYA, Ye.V.; SOKOLOVSKAYA, A.P.;  
STANISHCHEVA, O.N.; TAKHTADZHIAN, A.L.; FLOROVSKAYA, Ye.P.;  
TSVELEV, N.N.; SHISHKIN, B.K., prof. [deceased]; SHMIDT, V.M.;  
DUBROVSKAYA, I.P., red.

[Flora of Leningrad Province] Flora Leningradskoi oblasti.  
Leningrad. No.4. 1965. 356 p. (MIRA 18:9)

1. Leningrad. Universitet. 2. Chlen-korrespondent AN SSSR  
(for Shishkin).

BORISOVA, A.G.; IL'IN, M.M.; KLOKOV, M.V.; LINCHEVSKIY, I.A.; POBEDIMOVA,  
Ye.G.; SEMIDEL, G.L.; SOSKOV, Yu.D.; SOSNOVSKIY, D.I.;  
TAMAMSHYAN, S.G.; KHARADZE, A.L.; TSVELEV, N.N.; CHEREPANOV, S.K.;  
SHOSTAKOVSKIY, S.A.; BOBROV, Ye.G., doktor biol. nauk, prof.,  
red. toma; SHISHKIN, B.K., red. izd. [deceased]; SMIRNOVA, A.V.,  
tekh. red.

[Tribes Cynareae and Mutisieae.] Kolena Cynareae i Mutisieae.  
Moskva, 1963. 653 p. (Akademiia nauk SSSR. Botanicheskii institut.  
Flora SSSR, vol.28). (MIRA 16:12)

BORISOVA, A.G.; VASIL'YEV, V.N.; VASIL'CHENKO, I.T.; KIRPICHNIKOV, M.E.;  
LEONOVA, T.G.; LIPSHITS, S.Yu.; TSVELEV, N.N.; CHEREPANOV, S.K.;  
SMISHKIN, B.K. [deceased]; BOBROV, Ye.G., prof. doktor biol.nauk,  
red. toma.

[Cichorioideae.] Cichorioideae. Moskva, Izd-vo Nauka, 1964. 796 p.  
(Flora SSSR, vol.29) (MIRA 18t2)

ZHILAYSHINA, S.A.; KUROV, V.M.; SHISHKIN, P.N.

Low volume spraying of cotton. Zashch. rast. ot vred. i bol.  
9 no.10:16-17 '64 (MIRA 18:1)

1. Institut zoologii i parazitologii AN UzSSR i Sredneaziatstva-  
7a gruppa Gosudarstvennogo nauchno-issledovatel'skogo instituta  
Grazhdanskogo vozdushnogo flota.



SHTSUKIN, B. S.

"A Computatnon of the Intensity of Precipitations from Moisture-Bearing  
Clouds," Trudy OGO, No 13, (75), 1948.

SHISHKIN, B.V.

25187 Shishkin, B.V. Otechestennye Elektromobiln. Avtomobnyem-St', 1949, No.8, C.10-12

SO: Letonis' N<sup>o</sup>. 33, 1949

SHISHKIN, B. V. (Engr.)

"Investigation of the Motion of the Runners of a Snowmobile." Cand Tech Sci, Moscow  
Automotive Mechanics Inst. 5 Mar 54. Dissertation (Izdatel'stvo Mashinostroyeniya Moskva Moscow, 20 Feb 54)

SO: SUM 186, 19 Aug 1954

SHISHKIN, B.V.

USSR/Miscellaneous - Exhibits

Card 1/1 : Pub. 12 - 10/15

Authors : Shishkin, B. V.

Title : The international automobile exhibition in Vienna

Periodical : Avt. trakt. prom. 8, 28-30, Aug 1954

Abstract : A narrative report is presented concerning the international automobile exhibition in Vienna, in 1954. Short comments are given regarding the structural and operational characteristics of American, German and Italian vehicles. Illustrations.

Institution : .....

Submitted : .....

SHISHKIN, G., inzhener.

Shishkin, G. I. (1914-1984)

Method of repairing bronze parts. Mor.i rech. flot 14 no.1:30-31  
Ja '54. (MLBA 7:1)

(Ships—Maintenance and repairing)

SHISHKIN, B.V., kandidat tekhnicheskikh nauk, laureat Stalinskoy premii

The use of plastics in foreign automobiles. Avt.trakt.prom. no.9:  
25-30 S '55. (MIRA 8:12)

(Automobiles--Design and construction) (Plastics)

SHISHKIN, B.V., kand.tekhn.nauk

Brief technical characteristics of Soviet tractors. Avt.i trakt.prom.  
no.11:46-49 N '57. (MIRA 10:12)

1. Gosplan SSSR.  
(Tractors--Design and construction)

SHISHKIN, B.V., kand.tekhn.nauk

Prospective development of the tractor industry of the U.S.S.R.  
Trakt. i sel'khoz mash. no.10:3-7 O '58. (MIRA 11:10)  
(Tractor industry)



SHISHKIN, B.V., kand. tekhn. nauk

Tractors of the seven-year plan. Za rul. 17 no.4:2-3 Ap '59.  
(MIRA 12:6)

(Tractors)

SHISHKIN, B.V., kand.tekhn.nauk

Wheel-type truck tractors and their use in agriculture. Trakt.  
i sel'khoz mash. 32 no.5:3-4 My '62. (MIRA 15:5)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktorny  
institut.

(Tractors)

SHISHKIN, F., uchitel'

Made with one's own hands. Politekh. obuch. no.2:90-91 F '58.

(MIRA 11:1)

1.Srednyaya shkola No.22 Gor'kovskoy zheleznoy dorogi Vladimirskoy  
oblasti, Selivanskogo rayona, poselok Volosataya.  
(Technical education)

1. SHISHKIN, G.,ENG.
2. USSR (600)
4. Steam Boilers, Marine
7. Experience in designing steam superheaters for ship boilers. Mor.flot 12 no.10, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

SHISHKIN, G.; KOLOLA, G.

Apparatus for hydraulic testing of cylinders of marine internal combustion engines. Mor. i rech.flot 14 no.12:30 D '54. (MLRA 8:1)  
(Marine engines)

SHISHKIN, G.A., mostovoy master (Kurgan)

Experience in the exchange of adjusting devices on bridges. Put'  
put.khoz. 8 no.2:29-30 '64. (MIRA 17:3)

SHISHKIN, G.D.

New method for finishing chrome lining leathers. Ubm. tekhn.  
opyt. [MLP] no.29:15-17 '57. (MIRA 13:1)  
(Leather)

SHISHKIN, G.D.

New method for finishing colored glove leather. Obm. tekhn. opyt.  
[MLP] no.29:17-19 '57. (MIRA 13:0)  
(Leather)



SHISHKIN, G.I., inzhener.

New high-speed ship winch. Vest.mash. 33 no.4:19 Ap '53. (MLBA 6:5)  
(Windlass)

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LL-SHEN; SHISHKIN, G.I.

Rate of decomposition of apatite by nitric acid solutions of the system  
 $\text{CaO} - \text{P}_2\text{O}_5 - \text{N}_2\text{O}_5 - \text{H}_2\text{O}$ . Zhur.prikl.khim. 36 no.2:242-251 F '63.  
(MIRA 16:3)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.  
(Apatite) (Nitric acid) (Phosphates)

L 33766-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/WB/DJ

ACC NR. AR6017323

(A)

SOURCE CODE: UR/0273/66/000/001/0026/0026

48  
B

AUTHOR: Shishkin, G. M.

TITLE: Electronic and graphic investigation of protective films formed on parts during storage

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya, Abs. 1.39.181

REF SOURCE: Zap. Leningr. s.-kh. in-ta, v. 97, 1965, 92-96

TOPIC TAGS: lubricant, lubricant additive, metal surface, corrosion, anticorrosion additive, steel, nonferrous metal, surface film

ABSTRACT: The processes taking place on the surface of engine parts during long storage are described. Samples simulating D-54 engine crankshaft-connecting rod parts in an experimental apparatus - the veserometer AVK-2—were studied. The samples were in a contact for 30 days with Dn-11 oil which has a (TsIATIM-339) additive. The films formed by anticorrosion additives on steel and on non-ferrous metals have crystalline lattices. The corrosion aggressive medium of humid air reaches the metal surface through the intercrystalline fissures of the film. Consequently, in selecting protective agents it is necessary to consider not only their interaction with metal but also the forces acting between the molecules and the crystals of the additive.

SUB CODE: 11, 07/ SUBM DATE: none

Card 1/1

82

SHISHKIN, G. P. (Chief Engineer) (Institute of Mechanics Academy of Sciences  
Ukrainian SSR)

"Experiment of developing a three-axis gyrostabilizer for a loop antenna intended  
for aereoelectrical prospecting for natural resources,"

paper presented at the Second Scientific and Technical Intervuz Conference on  
Problems of Contemporary Gyroscopy, Ye. F. Otvagin, Secretary of the Organization  
Committee; Leningrad, Izvestiya Uchebnykh Zavedeniy, Prihorostroyeniye, No. 5,  
Sep/Oct 1958, pp 161-163

The Second Intervuz Conference on Problems of Contemporary Gyroscopy Technique,  
convoked by decision of the Ministry of Education USSR, took place in the  
Leningrad Institute of Precision Mechanics and Optics from 24 to 27 November 1958.

SHESTIN, G. S., DERTBAS, V. I.

"Histochemical Analysis of the Enzymes of the Esterase Group in the Wall  
of the Human Aorta During Atherosclerosis."

report submitted for the First Conference on the problems of Cyto and  
Histochemistry, Moscow, 19-21 Dec 1960.

Laboratory of Histochemistry of the Division of Experimental Biology and Pathology  
of the Institute of Experimental Biology and Medicine, Academy of Sciences USSR,  
Novosibirsk.

SHABANOV, A.M.; SHISHKIN, G.S.

Histochemical study of some enzymes in the structural elements of the  
vascular plexuses in the human brain. Vop. pat. i reg. org. krov. i  
dykh. no.1:179-184 '61. (MIRA 18:7)

DERIBAS, V.I.; FUKS, B.B.; SHISHKIN, G.S.

Activation of lipolytic enzymes in the wall of the human aorta in atherosclerosis. Dokl. AN SSSR 134 no.2:443-444 S '60.

(MIRA 13:9)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo otdeleniya Akademii nauk SSSR. Predstavleno akad. N.N. Anichkovym.

(ARTERIOSCLEROSIS) (LIPASES) (ESTERASES) (AORTA--DISEASES)

FUKS, B.B.; LEYTES, F.L.; DERIBAS, V.I.; SHISHKIN, G.S.

Studying the pathogenesis of atherosclerosis by histochemical  
determination of esterases and lipases. Dokl. AN SSSR 143  
no.1:245-248 Mr '62. (MIRA 15:2)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo  
otdeleniya AN SSSR i Tsentral'nyy institut kurortologii i  
fizioterapii. Predstavleno akademikom N.N. Anichkovym.  
(ARTERIOSCLEROSIS)  
(CHOLESTEROL METABOLISM)



FUKS, B.B.; SHISHKIN, G.S.

Principles and methods of the histochemical analysis of enzymes.  
Arkhn. anat., gist. i embr. 44 no.6:103-113. Je '63.

(MIRA 17:7)

1. Laboratoriya gistokhimii (zav. - doktor med. nauk B.B. Fuks)  
Instituta eksperimental'noy biologii i meditsiny Sibirskogo ot-  
deleniya AN SSSR, Novosibirsk.

FAKS, B.B. (Novosibirsk); VINOGRADOV, V.V. (Novosibirsk); SHISHKIN, G.S.  
(Novosibirsk); MAKSIMOVSKIY, L.F. (Novosibirsk)

Histochemical study of proteins, mucopolysaccharides, certain  
enzymes and deoxyribonucleic acid in skin wounds in alimentary  
and alimentary-chemical vitamin C deficiency. Arkh. pat. no.1:  
39-47 '64. (MIA 17:11)

1. In laboratorii gistokhimii (zav. - doktor med. nauk B.B. Faks)  
Instituta eksperimental'noy biologii i meditsiny (dir. - prof.  
Ye.N. Meshalkin; Sibirskogo otdeleniya AN SSSR i laboratorii  
nukleinykh kislot (zav. - kand. med. nauk R.I. Salganik) Insti-  
tuta tsitologii i genetiki (dir. K.D. Belyayev).

SHTEFKO, I.V.; RIDEL', E.I.; YEFIMOV, G.P., kand. tekhn. nauk,  
retsenzent; SHISHKIN, G.S., inzh., red.; MEDVEDEVA, M.A.,  
tekhn. red.

[Over-all mechanization of the loading and unloading of  
fruit and vegetables] Kompleksnaia mekhanizatsiia pogruzki-  
vygruzki plodoovoshchei. Moskva, Transzheldorizdat, 1963.  
58 p., (MIRA 16:7)

(Loading and unloading) (Fruit--Transportation)  
(Vegetables--Transportation)

YUSHKEVICH, Ye.P., kand. tekhn. nauk; VOROB'EV, A.K., kand. tekhn. nauk; TRUSHIN, A.M., inzh.; POTAPOV, V.P., inzh., retsenzent; SHISHKIN, G.S., inzh., red.; DEKZDOVA, N.D., tekhn. red.

[Centralized freight transportation; experience of railroad and automotive transportation in White Russia] TSentralizovannye perevozki грузов; opyt zheleznodorozhnogo i avtomobil'nogo transporta Belorussii. Moskva, Transzheldorizdat, 1963. 66 p. (MIRA 16:10)  
(White Russia--Freight and freightage)

OZEROV, F.I.; LYAKHOV, G.A., inzh., retsenzent; SHAYKEVICH, M.D.,  
inzh., retsenzent; SHISHKIN, G.S., inzh., red.;  
KHITROVA, N.A., tekhn. red.

[Labor protection and safety measures in materials handling]  
Okhrana truda i tekhnika bezopasnosti v gruzovom khoziaistve.  
Moskva, "Transport," 1964. 143 p. (MIRA 17:2)

FEDORCHUK, V.A.; MARTYNOV, M.S., inzh., retsenzent; SHISHKIN, G.S.,  
inzh., red.; VOROB'YEVA, L.V., tekhn. red.

[Mechanization of the servicing of ice-cooled refrigerator  
cars] Mekhanizatsiia ekipirovki vagonov-lednikov. Moskva,  
"Transport," 1964. 65 p. (MIRA 17:3)

SHISHKIN, G.V.; MAMAYEV, V.P.

2-Thienylhydrazine. Izv. Sib. otd. AN SSSR no.2:112-113 '62.  
(MIRA 16:10)

1. Institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

SHISHKIN, G.V.; MAMAYEV, V.P.

Synthesis of  $\beta$  - (2-thienyl)alanine. Zhur.ob.khim. 34 no.2:401-403  
F '64. (MIRA 17:3)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.



AUTHOR: BARANOV, S.A., POLEVOY, R.M., RODIONOV, Yu.F. 89-9-13/32  
 SHISHKIN, G.V.  
 TITLE: Nuclear Energy Levels of  $Tu^{169}$ . (Energeticheskiye urovni yadra  $Tu^{169}$ )  
 PERIODICAL: Atomnaya Energiya, 1957, Vol 3, Nr 9, pp 256-257 (U.S.S.R.)  
 ABSTRACT: By means of a double-focusing  $\beta$ -spectrometer, a scintillation spectrometer, and a proportional aiming tube the  $\gamma$ -radiation of the nucleus  $Yb^{169}$  was measured and a random scheme was set up. The following  $\gamma$ -energy with the corresponding multipole order was found:

8,42 (M1 + E2)	130,48 (E2)
20,74 (M1)	156 ?
63,13 (E1)	177,21 (0,75 M1 + 0,25 E2)
93,62 (0,9 M1 + 0,1 E2)	197,97 (M1)
109,67 (M1)	240,6 (E1 ?)
118,20 (E2)	260,8 (E1 ?)
	307,7 (E2)

The above can be arranged in form of a scheme with the following level values (spin and parity in brackets):

Card 1/2

Nuclear Energy Levels of  $Tu^{169}$ .

89-9-13/32

0	(1/2)
8,42	(3/2 ±)
118,20	(5/2 ±)
138,50	(7/2 ±)
316,06	(7/2 ±)
379,19	(7/2 -)
472,8	(9/2 -)
	+

(With 2 Slavic References).

ASSOCIATION: Not given  
PRESENTED BY:  
SUBMITTED: 15.4.1957  
AVAILABLE: Library of Congress  
Card 2/2

COV/56-74-6-2/51

AUTHORS:

Baranov, S. A., Rodionov, Yu. F., Shishkin, G. V.,  
Chistyakov, L. V.

TITLE:

The Energy Levels of the Dy<sup>161</sup> Nucleus (Energeticheskiye  
urovni yadra <sup>161</sup>Dy)

PERIODIC I:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958,  
Vol 34, No 6, pp 1367-1380 (USSR)

ABSTRACT:

First, the authors mention the previous papers concerning this subject. The purpose of this paper is a more accurate investigation of the electron spectrum (including its low energy part) and of the soft  $\gamma$ -radiation caused by the decay of Tb<sup>161</sup>. The electron spectrum of Tb<sup>161</sup> was investigated by means of a magnetic  $\beta$ -spectrometer with double focusing of the electron beam (Ref 11). The  $\gamma$ -radiation caused by the decay of Tb<sup>161</sup> was investigated by means of spectrometric proportional counters. The experimental device and the preparation of the radioactive source (Tb 161) is described in a few lines. A diagram shows a great part of the  $\beta$ -spectrum and the electron spectrum for the interval of the values of

Card 1/4

The Energy Levels of the Dy<sup>161</sup> Nucleus

SOV/56-34-6-2/51

Hg from 200 to 900 G.cm (obtained by means of the thin source) and from 780 to 980 G.cm (obtained by means of a more intense source). The authors observed some dozens of electron lines which are placed mainly in the low energy part of the spectrum, but they observed no(although if weak) high energy conversion lines. A table gives an interpretation of the conversion lines corresponding to the  $\gamma$ -transitions of the Dy<sup>161</sup> nucleus and also the intensities for some lines. In the Curie (Kyuri) diagram one may discern 4 partial spectra the energy limits of which are given. The following part of this paper deals with the measurement by means of a spectrometric proportional counter and of a  $\gamma$ -spectrometer. A diagram shows the spectrum of the X-radiation and of the soft radiation of Dy<sup>161</sup> plotted in the coordinates  $(N, E_{X,\gamma})$  where  $N$  denotes the number of the pulses and  $E_{X,\gamma}$  - the energy of the X- and  $\gamma$ -radiation (in keV) for 3 different measurement series. The next part of this paper deals with the determination of the multipole type of the  $\gamma$ -transitions. A table gives the experimental values of the absolute conversion coefficients for the  $\gamma$ -radiations with the energies 25,75; 48,9; 74,4 keV. The

Card 2/4

The energy levels of the  $\text{Dy}^{161}$  nucleus

30/8-51-6-2/51

$\gamma$ -radiation with the energies 33,9 and 74,5 keV corresponding, respectively, to the magnetic and electrical dipole radiation. The construction of a scheme of the energy levels of the  $\text{Dy}^{161}$  nucleus on the basis of the experimental data leads to some difficulties. Some of the observed conversion lines and  $\gamma$ -lines cannot be explained in an unambiguous way. For the  $\text{Dy}^{161}$  nucleus energy levels with 33,9; 44 + 45; 48,9; 74,5; 84; 100; 103,0; 151,5; ~325 keV were found. A figure shows the possible scheme of the  $\text{Dy}^{161}$  nucleus, it was plotted according to the experimental data. But this scheme does not pretend to be a complete one. The authors thank N. N. Mandrovskiy, A. I. Laz'ko, V. M. Stravinskiy, L. A. Leher, and D. F. Karetzkiy for the participation in the discussion concerning this paper. They thank also I. I. Gliv who placed to the authors' disposal some new data concerning the conversion coefficients of L-subshell atoms. There are 5 figures, 4 tables, and 21 references, 5 of which are Soviet.

Card 3/4

BARANOV, S.A.; POLEVOY, R.M.; RODIONOV, Yu.F.; SHISHKIN, G.V.;  
SHUBKO, V.M.

[Radioactive decay of  $\text{Th}^{231}$ ] Izuchenie radioaktivnogo ras-  
pada  $\text{Th}^{231}$ . Moskva, In-t atomnoi energii AN SSSR, 1960. 22 p.  
(MIRA 17:1)

S/048/60/024/03/02/012  
B006/B014

AUTHORS: Baranov, S. A., Polevoy, R. M., Rodionov, Yu. F., Shishkin,  
G. V., Shubko, V. M.

TITLE: Investigation of the Radioactive Decay of Th<sup>231</sup> 19 19

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 3, pp. 261-271

TEXT: The article under review was read at the Ninth All-Union Conference on Nuclear Spectroscopy (Khar'kov, January 26 - February 2, 1959). Th<sup>231</sup> is a well-known  $\beta$ -emitter with a half-life of 25.6 hours; numerous investigations of the level scheme have already been conducted. The authors were stimulated to further investigations by the fact that a level scheme deviating from Ref. 5 had been published in Ref. 4. The sample was obtained by bombarding Th<sup>230</sup> with slow neutrons in the RFT reactor. The subsequent chemical treatment of the sample is described in the introduction. Numerous details concerning measurements of the electron spectrum are reproduced in the 2nd section. Fig. 1 shows the most

Card 1/3

Investigation of the Radioactive Decay of  
Th<sup>231</sup>

S/048/60/024/03/02/019  
B006/B014

but is not in agreement with those published in Refs. 4 and 5. The authors finally thank P. E. Nemirovskiy for discussing results. There are 3 figures, 3 tables, and 16 references, 3 of which are Soviet.

✓B

Card 3/3



SHISHKIN, G.V.

Value function in multigroup age-diffusion approximation.  
Dokl. AN BSSR 7 no.10:669-672 0 '63. (MIRA 16:11)

1. Institut teplo- i massookhmena AN BSSR. Predstavleno  
akademikom AN BSSR A.K. Krasinym.

SHIBKIN, G.V.

Some conclusions of the theory of perturbations in a multigroup  
diffusion-age approximation. Dokl. Ak. Nauk SSSR no.11:743-745 M '63.  
(CIRA 17:9)

1. Institut teplo- i massobmena Ak. Nauk SSSR. Predstavleno akademikom  
Ak. Nauk SSSR A.K. Krasinyam.

LAZUKOV, N. A.; GAGARINSKIY, Yu. V.; GARANIN, S. I.; SHISHKIN, G. V. -

"Uranium-water critical assemblies."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,  
31 Aug-1 Sep 64.

ACCESSION NR: AP4036556

8/0139/64/000/002/0031/0038

AUTHOR: Shishkin, G. V.

TITLE: On some positron emission properties induced by antineutrino flow on protons ( $\bar{\nu} + p \rightarrow n + e^+$ )

SOURCE: IVUZ. Fizika, no. 2, 1964, 31-38

TOPIC TAGS: positron, antineutrino, proton, plane wave, Dirac spinor, wave function, matrix element, emission angle, longitudinal polarization, particle theory

ABSTRACT: Some properties of positron emission, induced by antineutrino flow on protons, have been investigated analytically. The method of Dirac particle theory with oriented spin is used, with the Hamiltonian of the reaction  $\bar{\nu} + p \rightarrow n + e^+$  written in the form  $H_{int} = \sum_j G_j (\bar{\Psi}_n^+ O_j \Psi_p) (\bar{\Psi}_e^+ O_j \Psi_{\bar{\nu}})$ , where  $G_j$  - constant corresponding to j-th interaction mode,  $j = V, A$ , and  $O_V = \alpha_\mu = (i\alpha, I)$ ,  $O_A = \beta_\mu = (\sigma, i\rho_1)$ . The wave function of the protons, neutrons, antineutrinos, and positrons is written as plane waves for the differential reaction probability per unit time, or

Card 1/2

ACCESSION NR: AP4020381

S/0250/64/008/002/0094/0096

AUTHOR: Shishkin, G. V.

TITLE: Possible approach to studying the behavior in time of reactor neutron flow in approximate perturbation theory (Presented by A. K. Krasin, academician, AN BSSR)

SOURCE: AN BSSR. Doklady\*, v. 8, no. 2, 1964, 94-96

TOPIC TAGS: neutron flow, reactor, approximate perturbation theory, diffusion-growth approximation, coefficient of fission, control rod, equation of neutron balance

ABSTRACT: The author proposes determination of neutron flows in a reactor as functions of time in a diffusion-growth approximation by the method of the theory of perturbations. He assumes that the changes in the physical properties of the reactor in time, as implicit functions of the initial neutron flows of the reactor, are given. In a multi-group diffusion-growth approximation, starting with equations of balance of neutrons, he obtains the desired relations for small  $\delta t$ . He handles single, double, and multi-group diffusion-growth approximations. "I use this opportunity to thank academician of the Academy of Sciences of BSSR, A. K. Krasin,

Card 1/2

L 14515-65 ENT(m) DIAAP/AFWL/ASD(a)-5/SSD/ESD(t)  
ACCESSION NR: AP5000328 S/0056/64/047/005/1757/1758

AUTHOR: Shishkin, G. V.

TITLE: Concerning one property of lepton emissions in the interaction between neutrinos and matter

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1757-1758

TOPIC TAGS: nucleon, neutrino, lepton, nucleon scattering, polarization

ABSTRACT: Using the theory of Dirac particle with oriented spin, the author derives expressions for the degrees of longitudinal and transverse polarizations of the leptons produced in reactions of the type  $\nu + N \rightarrow N' + L$  ( $\nu$  -- neutrino or antineutrino,  $N$  -- target nucleon,  $N'$  -- product nucleon,  $L$  -- lepton), and note that if the field of the target nucleons is fully polarized in the direction of

Card 1/2

L 14515-65  
ACCESSION NR: AP5000328.

the spin of the incoming neutrino (antineutrino), then the degrees of longitudinal and transverse polarizations of the leptons, and consequently also the spatial components of the lepton polarization vector produced in this interaction are independent of the constants of weak interaction in the (V, A) variant of weak four-fermion interaction in first approximation of perturbation theory. "I take the opportunity to thank Professor B. Pontecorvo for a consultation." Orig. art. has: 8 formulas.

ASSOCIATION: Institut teplo- i massoobmena Akademii nauk Belorusskoy SSR (Institute of Heat and Mass Exchange, Academy of Sciences Belorussian SSR)

SUBMITTED: 06Apr64

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 001

Card 2/2

SHISHKIN, G.V.; MAMAYEV, V.P.

Synthesis of  $\beta$ -(pentafluorophenyl) alanine. Izv. AN SSSR, Ser. khim.  
no.5:934 '65. (MIRA 18:5)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.



SHISHKIN, G. I.

Polarizing properties of muons in "elastic" neutrino processes  
( $\bar{\nu}_\mu + p \rightarrow n + \mu^+$ ,  $\nu_\mu + n \rightarrow p + \mu^-$ ). Dokl. AN BSSR 9 no.3:  
160-163 Mr '65. (MIRA 18:6)

1. Institut teplo- i massobmena AN BSSR.

L 8564-66 EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5021185

UR/0139/65/000/004/0166/0171

AUTHOR: Shishkin, G. V. 44, 55

TITLE: Concerning the properties of lepton emission produced when neutrinos interact with matter 38 19, 44, 55

SOURCE: IVUZ. Fizika, no. 4, 1965, 166-171

TOPIC TAGS: neutrino, lepton, weak nuclear interaction, fermion, electron polarization, positron, electron, mu meson, quantum electrodynamics

ABSTRACT: The author investigates some properties of lepton emissions accompanying the interaction between neutrino and matter, including the "elastic" neutrino processes, which are described by the general (V, A) variant of weak four-fermion interaction, and the corresponding reactions with antiparticles. The polarization properties of the lepton processes in question, which can be written in the form  $\nu + N \rightarrow B + L$  ( $\nu$ --neutrino or antineutrino, either muonic or electronic,  $N$ --the target nucleus, proton or neutron,  $B$ --the product, neutron or proton,  $L$ --the lepton, electron, positron, positive or negative muon). The degrees of longitudinal or transverse polarizations of the leptons are calculated, and the possibility of unpolarized leptons being present in the beam is discussed. The calculations are made by the method of the theory of Dirac particles with oriented spin, developed

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L 8564-66

ACCESSION NR: AP5021185

by A. A. Sokolov (with D. D. Ivanenko, Kvantovaya teoriya polya [Quantum Field Theory], M. 1952; Vvedeniye v kvantovuyu elektrodinamiku [Introduction to Quantum Electrodynamics], M., 1958). It is shown that the polarization vector of the produced protons is independent of the weak-interaction coupling constants and all the beam leptons are polarized when the spins of the incoming neutrino (antineutrino) and the target nucleons are parallel. The presence of unpolarized neutrons in the beam is discussed briefly. "I thank Professor B. M. Pontecorvo for consultation, and Professor A. A. Sokolov of the Moscow University for interest." Orig. art. has: 23 formulas. <sup>44.55</sup> <sup>44.55</sup> 12

ASSOCIATION: Institut teplo- i massoobmena AN BSSR (Institute of Heat and Mass Exchange AN BSSR) <sup>44, 55</sup>

SUBMITTED: 17Apr64

ENCL: 00

SUB CODE: GP

NR REF SOV: 006

OTHER: 007

jw

Card 2/2

SHISHKIN, G.V.

Nonpolarized state in lepton radiations engendered in neutrino  
interaction with matter. Dokl. AN BSSR 9 no.7:443-445 J1 '65.  
(MIRA 18:9)

1. Institut teplo- i massoobmena AN Belorusskoy SSR.

SHUBIN, C.V.

angular asymmetry of  $\mu$  decay and neutral weak current ( $H e \nu \mu$ ). (MIRA 18:10)  
IN BSSR 9 no.8:514-515 in 1980.

2. Institut uslovno i masochroma. IN BSSR.

L 00890-67 EWT(m)/T

ACC NR: AP6021922

SOURCE CODE: UR/0250/66/010/006/0381/0384

AUTHOR: Shishkin, G. V.

ORG: Institute of Nuclear Power Engineering, AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Two neutrinos <sup>19</sup> or one?

SOURCE: AN BSSR. Doklady, v. 10, no. 6, 381-384

TOPIC TAGS: neutrino, muon, electron, antineutrino, fermion, collision cross section, neutron, proton beam, weak nuclear interaction

ABSTRACT: This paper analyzes the cross section of weak tetrafermion interaction from the point of view of the possibility in principle of an experimental check of the component nature of the neutrino. Three groups of processes are examined: 1) with the participation of only an electron neutrino; 2) with the participation of only a muon neutrino; and 3) with the simultaneous participation of electron and muon neutrinos. It is concluded that the experimental study of the first two groups cannot give useful information on the component nature of the neutrino. The third group could give useful information, but an experimental study of the processes  $\nu + e^- \rightarrow \nu' + \mu^-$  requires proton beams with an intensity of  $10^{14}$  and energies of 250 BeV. The author thanks Academician of the Academy of Sciences BSSR, A. K. Krasin for interest in the work. This paper was presented by Academician, AN BSSR, A. K. Krasin. Orig. art. has: 5 formulas.

Cord 1/1 SUB CODE: 20/ SUBM DATE: 05Feb66/ ORIG REF: 005/ OTH REF: 010

SHISHKIN, G.V. [Shyshkin, H.V.]

Theory of the inverse  $\beta$  - e-decay. Vestsi AN BSSR. Ser.  
fiz.-mat.nav. no.2:88-94 '65. (MIRA 19:1)

L 04651-67 EWT(m) JR

ACC NR: AP6024001

SOURCE CODE: UR/0201/66/000/002/0005/0011

AUTHOR: Shishkin, G. V.; Sapozhnikov, V. V.

ORG: Institute of Nuclear Physics AN BSSR (Institut yadernoy fiziki AN BSSR)

TITLE: Influence of higher harmonics on the behavior of a subcritical reactor

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 2, 1966, 5-11

TOPIC TAGS: subcritical reactor, nuclear reactor characteristic, reactor neutron flux, slow neutron, neutron diffusion

ABSTRACT: The author estimates the influence of the higher harmonics on the time behavior of a subcritical reactor by the two-group method of diffusion approximation, with allowance made for the effect of the delayed neutrons, which are unified in a single group with averaged parameters. The neutron-balance equations are solved by standard means and it is shown that at the frequencies at which pulsed reactors normally operate, an appreciable noise background exists in the reactor, resulting from the fact that the flux in the reactor does not have time to attenuate in the interval between pulses, and this noise accumulates in the course of time. Examples of calculated reactivities for each of the first eight harmonics, relative to the activities of the first harmonic, are presented for rectangular and cylindrical reactors. The higher harmonics are shown to attenuate more rapidly than the fundamental. Values of the background attenuation coefficients are also given. The numerical calculations show that in the case of small subcriticality the main contribution to the nonstation-

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L 04651-67

ACC NR: AP6024001

ary neutron flux excited in a subcritical reactor by individual pulses is made by the first harmonic, since its damping factor is at least one order of magnitude lower than that of the succeeding harmonic. However, allowance for the higher harmonics must be made in cases where large negative reactivities are involved. The authors thank Academician AN BSSR A. K. Krasin for interest in the work and a discussion of the results. Orig. art. has: 16 formulas and 2 tables.

SUB CODE: 20/ SUBM DATE: 01Feb66/ ORIG REF: 002/ OTH REF: 005

kh

Card 2/2

ACC NR: AP6033820

SOURCE CODE: UR/0289/66/000/002/0105/0108

AUTHOR: Shishkin, G. V.; Mamayev, V. P.

ORG: Novosibirsk Institute of Organic Chemistry, Siberian Department,  
AN SSSR (Novosibirskiy institut organicheskoy khimii Sibirskogo otdele-  
niya AN SSSR)

TITLE: Synthesis of N,N-di-( $\beta$ -haloethyl)aminomethylthiophenes

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimi-  
cheskikh nauk, no. 2, 1966, 105-108

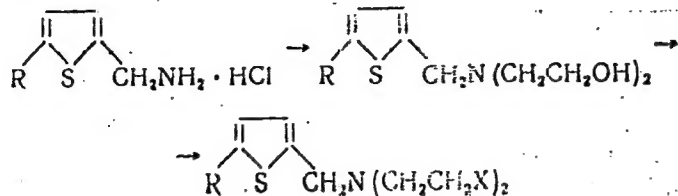
TOPIC TAGS: mutagenics, halogenated aminomethylthiophene, chloroethyl-  
aminomethylthiophene, bromethylaminoethylthiophene, *halogenated organic*  
*compounds, biologic mutation, ethylene oxide*

ABSTRACT: The N,N-di( $\beta$ -haloethyl)aminomethylthiophenes (I—IX) were  
obtained in 80—90% yield from ethylene oxide and the corresponding  
hydrochlorides of 2-aminomethylthiophenes via N,N-di( $\beta$ -hydroxyethyl)-  
amines:

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UDC: 547.732

ACC NR: AP6033820



- |   |  |
|---|--|
| I. R=H;   | IV. R=H; X=Cl;   |
| II. R=CH <sub>3</sub> ;   | V. R=CH <sub>3</sub> ; X=Cl; . .   |
| III. R=(CH <sub>2</sub> ) <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub> ; | VI. R=(CH <sub>2</sub> ) <sub>3</sub> COOH; X=Cl;                              |
|   | VII. R=H; X=Br;  |
|   | VIII. R=CH <sub>3</sub> ; X=Br;  |
|   | IX. R=(CH <sub>2</sub> ) <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub> ; X=Cl. |

The reactions take place in an alcohol or chloroform solution with boiling. Biological activity of I—IX was studied on *Acpergilus nedulans* at the Institute of Cytology and Genetics of the Siberian Branch of the Academy of Sciences USSR. They all showed significant mutagenic activities. [W.A. 50]

SUB CODE: 07,06/ SUBM DATE: 27Sep65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

SHISHKIN, I., glavnyy inzhener.

Increase steadily the labor productivity in open-pit mining. Mast. ugl.  
2 no.7:12-14 J1 '53. (MLRA 6:6)

1. Trest Karagandauglerstrez.

(Coal mines and mining)